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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,423	04/06/2000	Daniel Joseph Ondrus	200-0500	7482

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EXAMINER

KOCH, GEORGE R

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/544,423

Applicant(s)

ONDRUS, DANIEL JOSEPH

Examiner

George R. Koch III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23,25,26,28-31,33,34 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23,25,26,28-31,33,34 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9-15-2003 has been entered.

Specification

2. The disclosure is objected to because of the following informalities: On page 7, line 2, reference is made to "the one half couch joint". It appears *coach* was intended. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 29-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 29 and 30 are rejected for failing to further limit the parent claims. Claim 23 recites that the coverage area for the adhesive is up to 50% of the portion. Claim 29, which is dependent on claim 23, recites a coverage area of 50% to 75% of the portion. It is unclear what range is intended in claim 29.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 23, 25, 26, 28-31, 33, 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,759,489 to Pigott in view of Adhesives Handbook, (pages 1-19, 28-31, 40-43 and 94).

Pigott discloses an assembly line method (see column 3, lines 3-34) wherein a variety of joints are made by use of adhesive (see Fig. 4 and column 4, lines 53-64, see Fig. 17 and column 5, lines 1-10, and Fig. 19, columns 22-33). The joints are provided between a first member and a second member as claimed. Pigott also discloses that the joints would be of use in vehicles such as automobile bodies (Abstract, line 1).

Pigott does not disclose depositing adhesive up to fifty percent of the coverage portion and up to ten percent of the fill portion to form the joint between the first and second member, so that seepage of the adhesive from the joint is a minimum while stress transfer of the joint is a maximum. Nor does Pigott disclose the various areas

and length percentages. Pigott also does not disclose that the adhesive is viscous, and is silent in this regard.

However, an assembly line method would inherently have a predetermined coverage length, and the coverage percentage would be a predetermined percentage of the coverage length. Furthermore, an assembly line method would by definition have a predetermined coverage length, and the coverage percentage would be a predetermined percentage of the coverage length.

Furthermore, with respect to the various adhesive coverage areas recited and claim, it is known that bond strength increases with adhesive coverage area, but that the risk of seepage also increases with adhesive coverage area. One of ordinary skill in the art would know to conduct routine experimentation as suggested in Adhesives Handbook pages 18-20 in order to find the best coverage area for creating the strongest bond without the risk of adhesive seepage that can damage the end product. Adhesives Handbook pages 18-20 discloses that the stress profile, i.e., maximum stress transfer would depend on the intended use of the joint, and that experimentation would determine the optimal adhesive especially with regard to desired overlaps, i.e., coverage and fill areas (see, for example, Adhesives Handbook figures 2.4, 2.5 and 2.6 in page 19 which shows analysis of bond strength, and especially discloses in Figure 2.5 the relationship between length and width of a bond and maximum bond strength). Furthermore, it is considered notoriously well known and conventional in assembly line methods to minimize adhesive seepage. Minimizing adhesive seepage prevents damage to the substrate as well as reduces adhesive consumption. Therefore, it would

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have been obvious to one of ordinary skill in the art at the time of invention to have conduct routine experimentation to achieve the coverage areas claimed in order to balance the twin demands of bond strength and reduced seepage.

With regard to the adhesive being viscous, Adhesive Handbook discloses that epoxy adhesives, a viscous adhesive, are often used in automobile applications (see pages 42, first column). Adhesive handbook also discloses that epoxy adhesives have high cohesive strength and low shrinkage and creep. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a viscous adhesive such as epoxy adhesives in order to achieve the benefits of high cohesive strength and low shrinkage and creep, both of which are factors that maximize stress transfer and minimize seepage.

Furthermore, as to claim 31, Pigott discloses a number of joints wherein the first member includes a coverage portion and flange fill portions as claimed. See Figure 4.

Furthermore, as to claims 25, 26, 28, 31, 33, 34, and 36, Adhesives Handbook discloses many well known joints, including lap joints as in claim 36 (page 8, Figure 2.2, picture d), one half coach joints as in claim 26 and 34 (see page 11, and page 12, top row, third and fourth figure) and full coach joints as in claims 25 and 33 (for example, see page 12, top row, third and fourth figure). As to claim 31, Adhesives handbook also discloses joint members with arcuate portions in the variety of coach joints. One in the art would appreciate that all of these joints are well known, have certain favorable loading characteristics (see Adhesives Handbook, pages 8, 18 and 19), and would utilize routine experimentation such as a stress analysis as disclosed in Adhesives

Handbook to determine the appropriate joint. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the claimed joints disclosed in Adhesives Handbook in order to achieve proper stress handling characteristics.

As to claim 29 and 30, the claimed dimensions are considered achievable based on the stress analysis disclosed in Adhesives Handbook and applied to claim 23 above.

8. Claims 23, 25, 26, 28-31, 33, 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,849,122 to Kenmochi in view of Adhesives Handbook, (pages 1-19, 28-31, 40-43 and 94).

As to claims 23 and 31, Kenmochi discloses an assembly line method for making vehicle components wherein the joints are made substantially identical manner. From Figures 2 and 3 the exemplary joint is clearly a lap joint, i.e, a joint between a first member and a second member as in claim 28. As stated before, an assembly line method by definition includes performing the same task in a substantially identical manner on multiple items on the assembly line. Kenmochi discloses an asphalt based adhesive (see column 5) which is considered an viscous adhesive.

Kenmochi does not disclose depositing adhesive up to fifty percent of the coverage portion and up to ten percent of the fill portion to form the joint between the first and second member, so that seepage of the adhesive from the joint is a minimum while stress transfer of the joint is a maximum.

However, an assembly line method would inherently have a predetermined coverage length, and the coverage percentage would be a predetermined percentage of the coverage length. Furthermore, an assembly line method would by definition have a predetermined coverage length, and the coverage percentage would be a predetermined percentage of the coverage length.

Furthermore, with respect to the various adhesive coverage areas recited and claim, it is known that bond strength increases with adhesive coverage area, but that the risk of seepage also increases with adhesive coverage area. One of ordinary skill in the art would know to conduct routine experimentation as suggested in Adhesives Handbook pages 18-20 in order to find the best coverage area for creating the strongest bond without the risk of adhesive seepage that can damage the end product. Adhesives Handbook pages 18-20 discloses that the stress profile, i.e., maximum stress transfer would depend on the intended use of the joint, and that experimentation would determine the optimal adhesive especially with regard to desired overlaps, i.e., coverage and fill areas (see, for example, Adhesives Handbook figures 2.4, 2.5 and 2.6 in page 19 which shows analysis of bond strength, and especially discloses in Figure 2.5 the relationship between length and width of a bond and maximum bond strength). Furthermore, it is considered notoriously well known and conventional in assembly line methods to minimize adhesive seepage. Minimizing adhesive seepage prevents damage to the substrate as well as reduces adhesive consumption. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have

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conduct routine experimentation to achieve the coverage areas claimed in order to balance the twin demands of bond strength and reduced seepage.

Furthermore, as to claims 25, 26, 28, 31, 33, 34, and 36, Adhesives Handbook discloses many well known joints, including lap joints as in claim 36 (page 8, Figure 2.2, picture d), one half coach joints as in claim 26 and 34 (see page 11, and page 12, top row, third and fourth figure) and full coach joints as in claims 25 and 33 (for example, see page 12, top row, third and fourth figure). As to claim 31, Adhesives handbook discloses joint members with arcuate portions in the variety of coach joints. One in the art would appreciate that all of these joints are well known, have certain favorable loading characteristics (see Adhesives Handbook, pages 8, 18 and 19), and would utilize routine experimentation such as a stress analysis as disclosed in Adhesives Handbook to determine the appropriate joint. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the claimed joints disclosed in Adhesives Handbook in order to achieve proper stress handling characteristics.

As to claim 29 and 30, the claimed dimensions are considered achievable based on the stress analysis disclosed in Adhesives Handbook and applied to claim 23 above.

Response to Arguments

9. Applicant's arguments with respect to claims 23, 25-26, 28-31, 33, 34, and 36 have been considered but are moot in view of the new ground(s) of rejection. The

remarks submitted with the amendments have been fully considered but they are not persuasive.

10. With regard to information concerning coverage and fill areas, Adhesives Handbook has been cited as a disclosure of the known relationship of bond area and bond strengths.

11. Applicant's other arguments mainly focus on details of the reference not excluded by applicant's claims. For example, the discussion of the mating locations of Pigott, precision drilled holes, and arrangement of workstations on page 5-7 is not excluded by applicant's claims. Similarly, in page 8, the fact that the members in Kenmochi are honeycomb panels or some of the more particular details such as having structural member is not excluded by applicant's claims (or even applicant's specification, for that manner).

Furthermore, the joints disclosed by Kenmochi and Cornille include joints that would have a second fill portion extending from the second point to a line that is collinear to the tangent portion.

12. Applicant argues that an assembly line method would NOT have a predetermined coverage length, and the coverage percentage would be a predetermined percentage of the coverage length, and furthermore, an assembly line method would NOT by definition have a predetermined coverage length, and the coverage percentage would NOT be a predetermined percentage of the coverage length. However, predetermined merely means "to determine beforehand". As applicant points out, an assembly line includes an arrangement of machines, equipment

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and workers in which the work passes from operation to operation in direct line until the product is assembled. These operations are considered predetermined, since an assembly line has to be determined beforehand. Furthermore, Pigott and Kenmochi disclose adhesive application and work steps. Therefore, these steps are predetermined, i.e., determined beforehand. This lengths and percentages need not be consistent - i.e., they may be variable. Predetermined does not imply consistency. Furthermore, as to the dimensions of the fill and coverage areas, Adhesives Handbook discloses this known relationship.

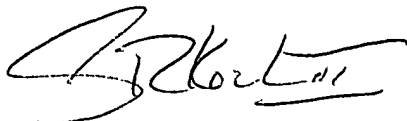
Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (703) 305-3435 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

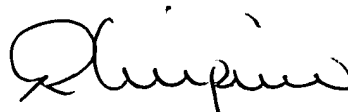
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read "George R. Koch III".

George R. Koch III
November 2, 2003

A handwritten signature in black ink, appearing to read "Richard Crispino".

RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700